ABSTRACT

An ecofriendly process for acylation of an alkylated benzene derivative has increased selectivity towards *para* position and comprises a step of reacting the alkylated benzene derivative with an acylating agent in the presence of nitrobenzene, dichlorobenzene, dimethylsulfolane, and/or benzonitrile, and a crystalline alumino silicate catalyst having general formula $M_{2/m}O.Al_2O_3.x\ SiO_2.wH_2O$, wherein M is an alkali cation, a rare earth cation, and/or a proton, wherein the Si/Al ratio is in the range of 5.5 to 20, wherein the weight percentage of the alkali and/or lanthanide cation is between 10 to 30, and wherein the step of reacting is performed at temperature between 80 to 140 °C for 5 to 25 hours. In a further step, the solid catalyst is separated from the reaction mixture of step, and in yet another step, the acylated alkyl benzene derivative is separated from the mixture.